Work Order ID 86470

June-29-12 1:29:13 PM

86470

Item ID: D4542-5

Accept *N900040100*

Setup Start *NS1*

Stop *NS2*

Revision ID:

Item Name: Retainer, Inner

Start Date: 29/06/2012 **Start Qty:** 10.00 *10*

Required Date: 13/07/2012 **Req'd Qty:** 10.00 *10*

Cust Item ID:

Customer:

Reference:

Approvals: **Process Plan:** MLJ **Date:** 12/06/29 **Tooling:** **Date:**

QC: **Date:** **SPC (Y/N):** **Date:**

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
100 *100* Waterjet FLOW CNC Waterjet 6061 .032	Memo 1- Cut as per dwg Prog rev: B Dwg rev: B 2- Deburr	0.00 0.00				10	0		Jm 12-7-9
110 *110* QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00				10	0		Jm 12-7-9

Draw Nbr	Revision Nbr
D4542	B

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ____________ **PAR #:** ______ **Fault Category:** ____________ **NCR:** Yes No **DQA:** _____ **Date:** ________

Resolution: ____________ **Disposition:** ____________ **QA: N/C Closed:** ________ **Date:** ________

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 86470 *86470*

June-29-12 1:29:13 PM

Item ID: D4542-5 **Accept** *N900040100* **Setup Start** *NS1*

Revision ID:

Item Name: Retainer, Inner **Stop** *NS2*

Start Date: 29/06/2012 **Start Qty:** 10.00 *10* **Cust Item ID:**

Required Date: 13/07/2012 **Req'd Qty:** 10.00 *10* **Customer:**

Reference:

Approvals: **Process Plan:** ____ **Date:** ____ **Tooling:** **Date:** **Run Start** *NR1*

QC: ____ **Date:** ____ **SPC (Y/N):** **Date:** **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00 5/26/09				(10)			
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: 110 Memo	0.00 0.00				(10)			12-7-10
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00				CK	12/7/10		

umf 12-07-10

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ____________ PAR #: ______ Fault Category: ____________ NCR: Yes No DQA: _____ Date: ________

Resolution: ____________ Disposition: ____________ QA: N/C Closed: ________ Date: ________

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
			Corrective Action Section B					
DATE	STEP	Description of NC Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector

NOTE: Date & initial all entries

Picklist Print

June-29-12 1:29:17 PM

Work Order ID: 86470

86470

Parent Item: D4542-5

D4542-5

Parent Item Name: Retainer, Inner

Start Date: 29/06/2012 **Required Date:** 13/07/2012

Start Qty: 10.00 **Required Qty:** 10.00

Comments: IPP revA 12.01.04 New Issue EC verified by:DD IPP REV:B 12.02.24 as per dwg reva DD verf:EC IPP REV:C 12.05.08 as per dwg revB DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6S.032 *M6061T6S.032* 6061-T6 Sheet 0.032"		Purchased	No			100	sf	247.7760	0.208 **	2.189474 2.2	S.F	Jn 12-7-9	

Location	Loc Qty	Loc Code
MAT021	247.776	
118106	46.136	
120218	20.13	
120285	42.24	
121099	139.27	

122311 122311

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W/O:	WORK ORDER CHANGES						
DATE	**STEP**	**PROCEDURE CHANGE**	**By**	**Date**	**Qty**	**Approval** Chief Eng / Prod Mgr	**Approval** QC Inspector

Part No: ____________ **PAR #:** ______ **Fault Category:** ____________ **NCR:** Yes No **DQA:** _____ **Date:** ________

Resolution: ____________ **Disposition:** ____________ **QA: N/C Closed:** ________ **Date:** ________

NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	**STEP**	**Description of NC** Section A	**Corrective Action** Section B			**Verification** Section C	**Approval** Chief Eng	**Approval** QC Inspector
			Initial Chief Eng	**Action Description** Chief Eng	**Sign & Date**			

NOTE: Date & initial all entries

H:\fFORMS\Quality Assurance\approved QA\NCRWO RevE

DART AEROSPACE LTD	Work Order:	86478
Description: Retainer, Inner	Part Number:	D4542-5
Inspection Dwg: D4542 Rev: B		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.275	+/-0.010	1.278"	✓		✓	MM01
10.01	+/-0.030	9.999"	✓		✓	Protractor
2.70	+/-0.030	2.704"	✓		✓	MM01
0.032	+/-0.010	0.032"	✓		✓	MM01

Measured by:	Jim	Audited by:	[signature]	Preliminary Approval:	
Date:	12-7-9	Date:	17/07/09	Date:	

Rev	Date	Change	Revised by	Approved
A	12.05.15	New Issue	KJ [signature]	[signature]

Dart Aerospace Ltd

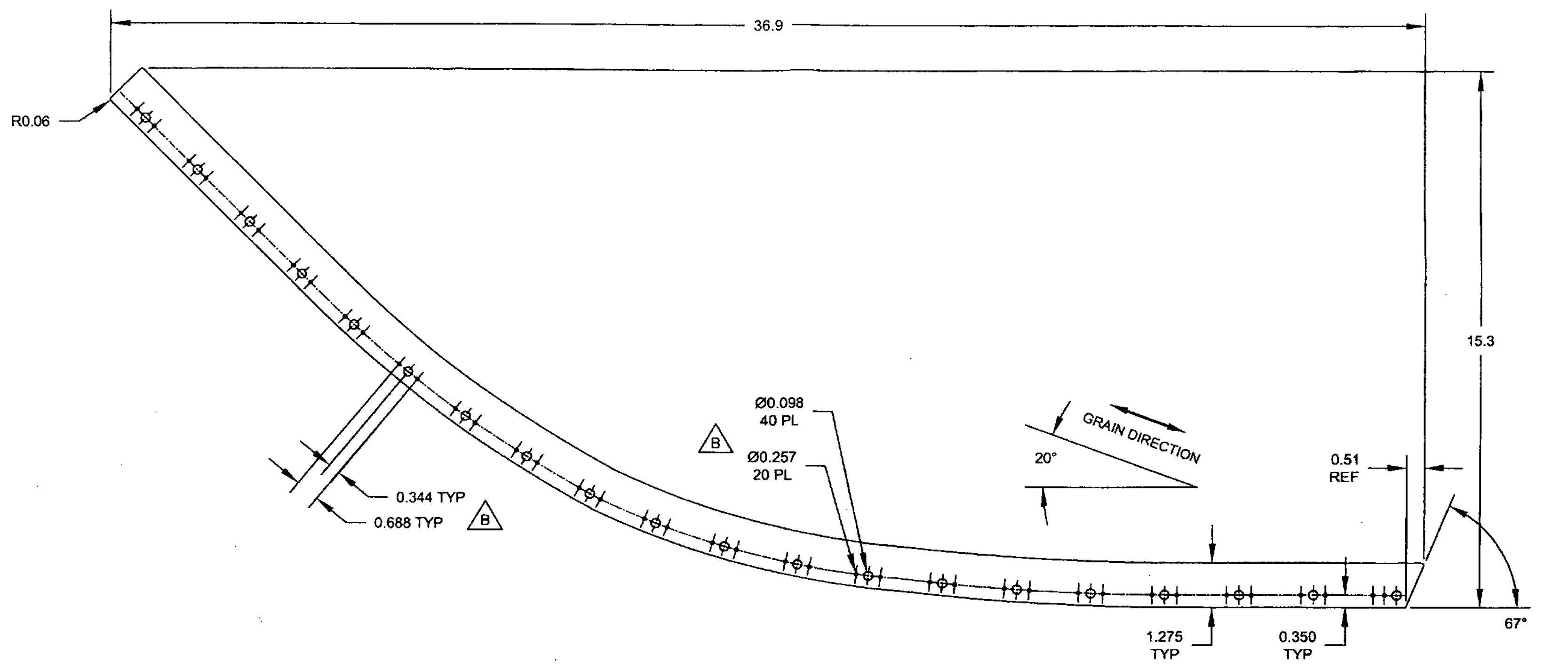
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ____________________ **PAR #:** _______ **Fault Category:** __________________ **NCR:** Yes No **DQA:** _____ **Date:** _________

Resolution: ___________________ **Disposition:** ____________________ **QA: N/C Closed:** __________ **Date:** _________

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
			Corrective Action Section B					
DATE	STEP	Description of NC Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector

NOTE: Date & initial all entries



D4542-1 RETAINER, LH INNER
(LOWER)

NOTES:

1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
   PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
   REF DART SPEC. M6061T6S.032
2) FINISH: NONE (B)
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.17 lbs
8) PROFILE PER DRAWING FILE "D4542-1-REVB.DXF"

REV.	DESCRIPTION	BY	DATE
B	RMV FINISH & ADD HOLES (-1/-2/-3/-5/-7) ADD/MODIFY ORIENTATION MARK (C2-4, C5-6)	CP	12.04.20
A	NEW ISSUE	CP	12.01.09

DESIGN	CP	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN	CP	
CHECKED	DS	DRAWING NO. D4542 — REV. B — SHEET 1 OF 5
MFG. APPR.	[signature]	
APPROVED	[signature]	TITLE: RETAINER, INNER — SCALE: NTS
DE APPR.	[signature]	
DATE	12.04.20	

Dart Aerospace Ltd

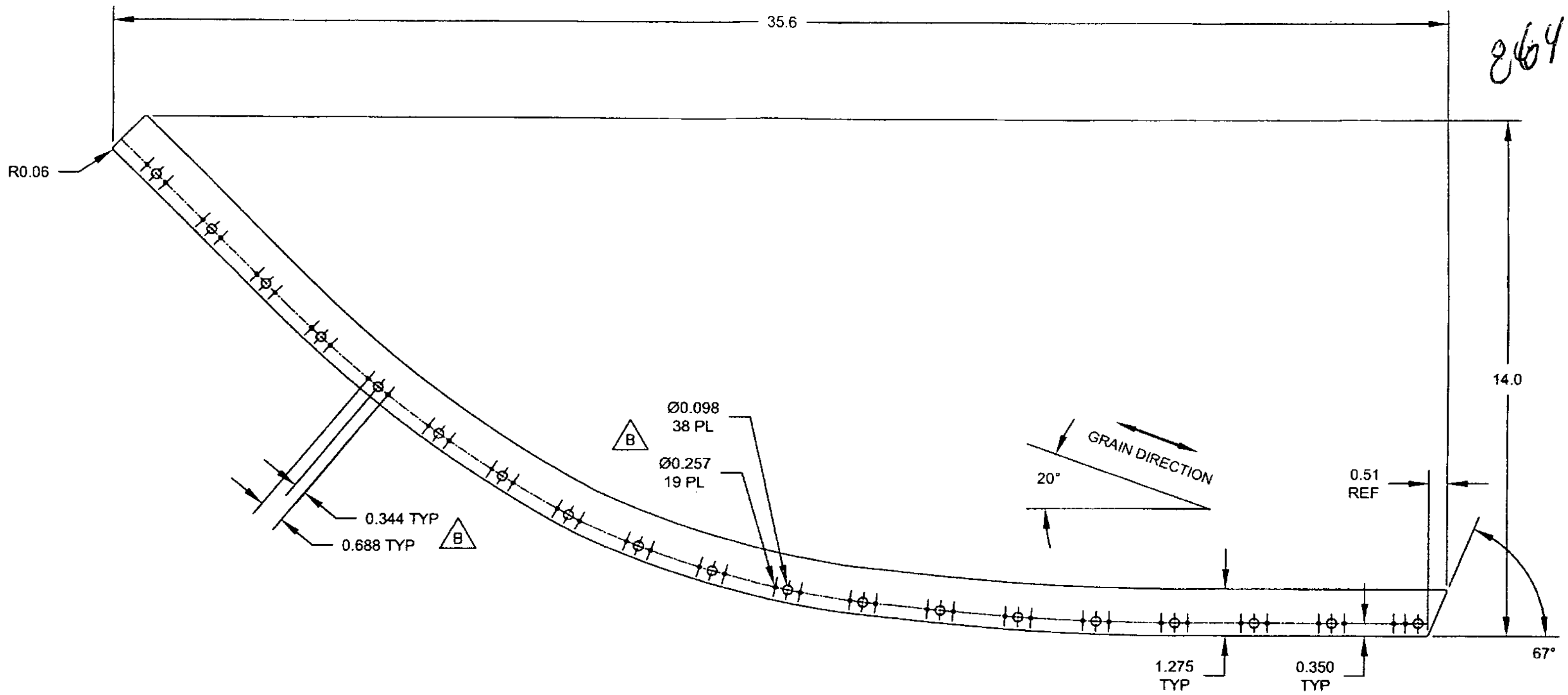
W/O:	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ____________ PAR #: ______ Fault Category: ____________ NCR: Yes No DQA: _____ Date: ________

Resolution: ____________ Disposition: ____________ QA: N/C Closed: ________ Date: ________

NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4542-2 RETAINER, RH INNER
(LOWER)

RELEASED 2012-05-07

NOTES:
1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
(B) 2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.17 lbs
8) PROFILE PER DRAWING FILE "D4542-2-REVB.DXF"

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. REV. B
MFG. APPR.		D4542 SHEET 2 OF 5
APPROVED		TITLE SCALE
DE APPR.		RETAINER, INNER NTS
DATE	12.04.20	

Dart Aerospace Ltd

W/O:	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

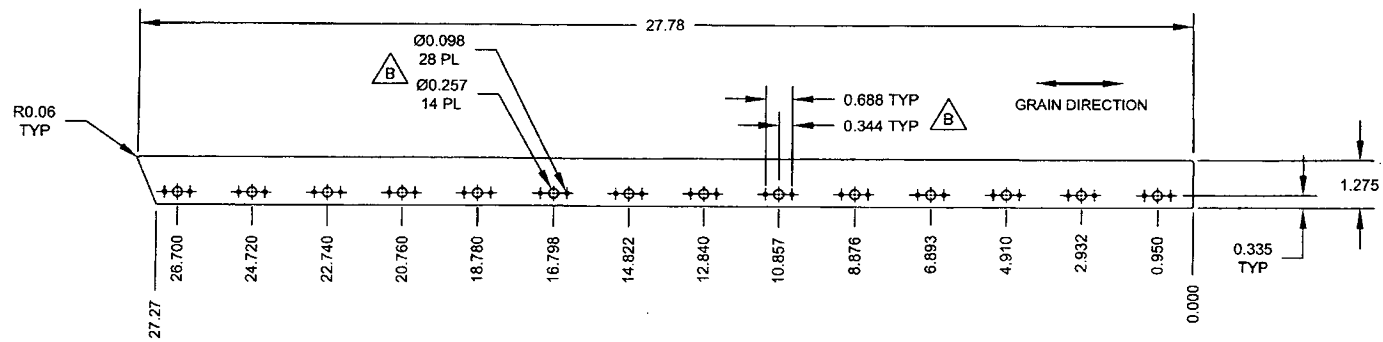
Part No: ____________________ PAR #: _______ Fault Category: __________________ NCR: Yes No DQA: _____ Date: _________

Resolution: ____________________ Disposition: ____________________ QA: N/C Closed: __________ Date: _________

NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

E6470



D4542-3 RETAINER, INNER
(SIDE)

RELEASED 2012-05-07

NOTES:
1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
2) FINISH: NONE (B)
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.11 lbs
8) PROFILE PER DRAWING FILE "D4542-3-REVB.DXF"

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D4542 — REV. B — SHEET 3 OF 5
MFG. APPR.		
APPROVED		TITLE RETAINER, INNER — SCALE NTS
DE APPR.		
DATE	12.04.20	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

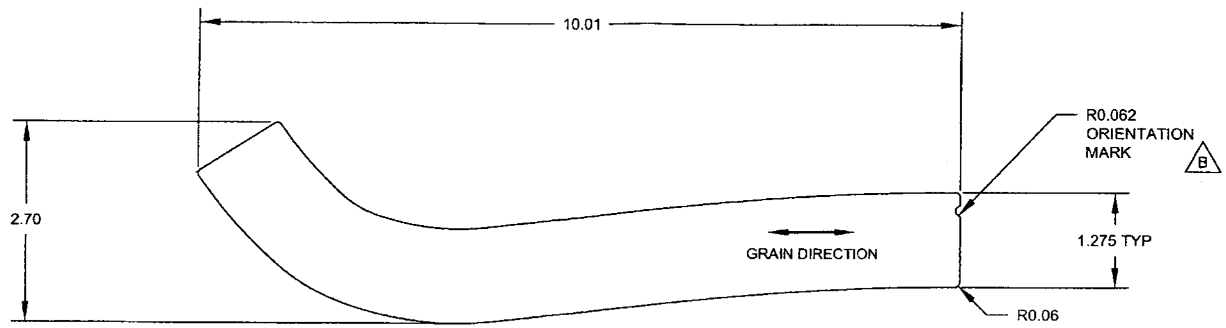
Part No: ____________ **PAR #:** ________ **Fault Category:** ____________ **NCR:** Yes No **DQA:** ______ **Date:** ________

Resolution: ____________ **Disposition:** ____________ **QA: N/C Closed:** ________ **Date:** ________

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8647e



D4542-5 RETAINER, INNER
(TOP CORNER)

RELEASED 2012-05-07

NOTES:
1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.04 lbs
8) PROFILE PER DRAWING FILE "D4542-5-REVB.DXF"

DESIGN		**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. D4542 — REV. B — SHEET 4 OF 5
MFG. APPR.		
APPROVED		TITLE RETAINER, INNER — SCALE NTS
DE APPR.		
DATE	12.04.20	

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Appro QC Inspe

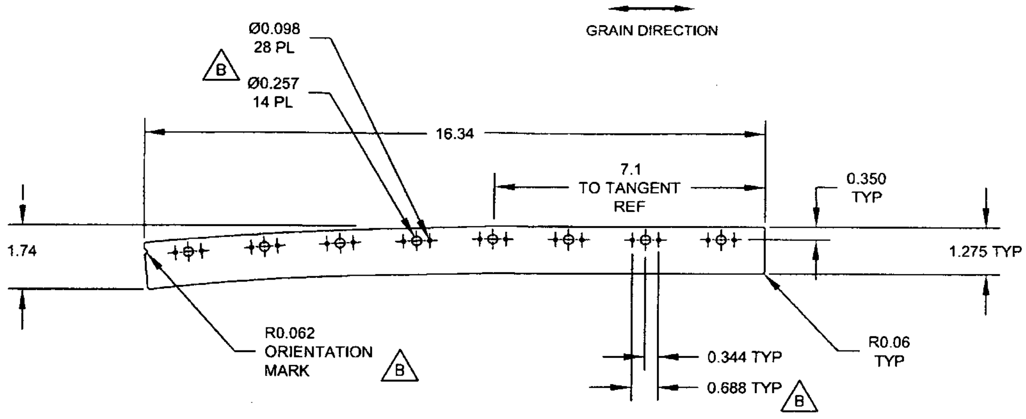
Part No: ____________ PAR #: ______ Fault Category: ____________ NCR: Yes No DQA: _____ Date: ________

Resolution: ____________ Disposition: ____________ QA: N/C Closed: ________ Date: ________

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

86470



D4542-7 RETAINER, INNER
(TOP)

RELEASED 2012 -05- 07

NOTES:
1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
(B) 2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 0.07 lbs
8) PROFILE PER DRAWING FILE "D4542-7-REVB.DXF"

DESIGN	[signature]	**DART AEROSPACE LTD** HAWKESBURY, ONTARIO, CANADA	
DRAWN	[signature]		
CHECKED	[signature]	DRAWING NO.	REV. B
MFG. APPR.	[signature]	D4542	SHEET 5 OF 5
APPROVED	[signature]	TITLE	SCALE
DE APPR.	[signature]	RETAINER, INNER	NTS
DATE	12.04.20		

Dart Aerospace Ltd

W/O:	WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: ________ **PAR #:** ________ **Fault Category:** ________ **NCR:** Yes No **DQA:** ________ **Date:** ________

Resolution: ________ **Disposition:** ________ **QA: N/C Closed:** ________ **Date:** ________

NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries